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REMARKS

Applicant acknowledges, with appreciation, Examiner Vinh's courteously in conducting a telephonic interview on January 14, 2003. During the interview the present Amendment was discussed and approved by Examiner Vinh. It is Applicant's understanding that the present Amendment places the application in condition for allowance.

For completeness, Applicant would submit that the present Amendment does not generate any new matter issue or any new issue for that matter, but merely clarifies that the claimed method is in fact directed to a method for fabricating a diffractive optical element (DOE) and comprises ion etching a pattern in a ZnSe polycrystalline substrate with a gas consisting of a chlorine-based gas which does not include a hydrocarbon group. Accordingly, Applicant solicits entry and favorable consideration of the present Amendment pursuant to 37 C.F.R. §1.116.

Also for completeness, Applicant would address the imposed rejections. For reasons set forth below and for the reasons discussed during the January 14, 2004 telephonic interview, Applicant submits that all claims are allowable.

In the Office Action dated July 16, 2003, the Examiner imposed the following prior art rejections:

1. Claims 1 and 4 were rejected under 35 U.S.C. §103 for obviousness predicated upon Narui et al. in view of Biricik et al.;

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2. Claims 2 and 7 were rejected under 35 U.S.C. §103 for obviousness predicated upon Narui et al. in view of Biricik et al.;

3. Claims 3 and 8 were rejected under 35 U.S.C. §103 for obviousness predicated upon Narui et al. in view of Biricik et al. and Collins;

4. Claims 5, 9 and 18 were rejected under 35 U.S.C. §103 for obviousness predicated upon Narui et al. in view of Biricik et al. and Harafuji;

5. Claims 6, 11 and 12 were rejected under 35 U.S.C. §103 for obviousness predicated upon Narui et al. in view of Biricik et al. and Kim et al.; and

6. Claim 13 was rejected under 35 U.S.C. §103 for obviousness predicated upon Nauri et al. in view of Biricik et al. and Lee et al.

Each of the above rejections under 35 U.S.C. §103 is traversed. Specifically, each of the above rejections is predicated upon an attempt to combine Narui et al. and Biricik et al. The attempted combination is not viable and the deficiencies of such an attempted combination are not cured by any of the secondary references to Collins, Harafuji, Kim et al., and Lee et al.

The claimed invention is directed to a method of fabricating a DOE wherein smoothness of the etched surface is of significance, not periodicity. It is not disputed on this record that the reference to Narui et al. is **not** addressed to fabricating a DOE or concerned with diffraction. The present invention, however, as stated in the preamble and in the body of the claim, is directed to a method of fabricating a DOE. This limitation can not be ignored. See, for example, *Eaton Corp. v. Rockwell International Corp.*, ___F.3d. __ 66 USPQ2d 1271 (Fed. Cir. 2003); *Invitrogen Corp. v. Biocrest*

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Manufacturing Ltd., __F.3d__ 66 USPQ2d 1631 (Fed. Cir. 2003); Loctite Corp. v. Ultraseal, Ltd., 781 F.2d 861, 228 USPQ 90, (Fed. Cir. 1985).

The secondary reference to Biricik et al. does not cure the argued difficiences of Narui et al. In addition, for reasons expressed in the responsive Amendment submitted October 14, 2003, Applicant submits that there is an insufficient factual basis of record upon which to predicate the conclusion that one having ordinary skill in the art would have been realistically led to modify the admittedly monocrystalline zinc selenide material employed by Narui et al. by employing a polycrystalline zinc salinide material. *In re Lee, 237 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002).* Certainly, the requisite realistic motivation of success is not apparent. *In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).*

Applicant further submits that the problem addressed and solved by the claimed invention, under the facts of this case, constitutes a potent indicum of **nonobviousness**. *North American Vaccine, Inc. v. American Cyanamid Co., 7 F.3d 1571, 28 USPQ2d 1333 (Fed. Cir. 1993).* As previously argued in the responsive Amendment submitted October 14, 2003, the present invention addresses and solves an etching problem attendant upon fabricating a DOE using conventional hydrocarbon-based gases. Applicant discovered that the etching rate depends heavily on the crystalline structure of the polycrystalline grains, because of the generation of by-products. Since the etching speed of polycrystalline grains differs depending upon the polycrystalline plain orientation, the etched surfaces becomes uneven or course, which is disadvantageous in fabricating a DOE. Applicant addressed and solved that problem by etching the polycrystalline zinc salinide ZnSe substrate employing a chlorine-based gas which does include a

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hydrocarbon group. This problem and any solution thereto is conspicuous by their absence in the applied prior art.

Applicant submits that the prima facie basis to deny patentability of the claimed invention has not been established for lack of the requisite factual and want of the requisite realistic motivation. Moreover, upon giving due consideration to the problem addressed and solved by the claimed invention, Applicant submits that one having ordinary skill in the art would not have found the claimed invention as a whole obviousness within the meaning of 35 U.S.C. §103. *Jones v. Hardy, 727 F.2d 1524, 220 USPQ 1021 (Fed. Cir. 1984).*

Applicant, therefore, submits that each of the imposed rejections under 35 U.S.C. §103 is not factually or legally viable and, hence, solicits withdrawal thereof.

Based upon the foregoing, and again consistent with the understanding reached during the telephonic interview with Examiner Vinh on January 14, 2004, Applicant submits that the imposed rejections have been overcome and that all pending claims are in condition for allowance. Favorable consideration is, therefore, respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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